

U.S. Serial No. 10/675,169
Reply to Office Action of: September 6, 2005
Family Number: P2002J108

III. DRAWING AMENDMENTS

Please replace Figure 1 of the drawings with the attached replacement Figure 1.

Replacement Figure 1 is identified in the top margin as "Annotated Sheet."

U.S. Serial No. 10/675,169
Reply to Office Action of: September 6, 2005
Family Number: P2002J108

V. REMARKS

The present Amendment and Response is filed in response to the Office Action mailed September 6, 2005. The specification has been amended. Claim 4 has been amended, which is fully supported by the specification. Figure 1 of the drawings has been corrected. No new matter is introduced with the amendments and corrections. Claims 1-15 are currently pending.

The applicants offer the following remarks for consideration in view of the Examiner's objections and rejections. Reconsideration of the patentability of the instant application is respectfully requested in view of these amendments and remarks.

1. Objections to the Drawings under 37 C.F.R. 1.84(p)(5)

Figure 1 has been objected to as failing to comply with 37 C.F.R. 1.84(p)(5) because reference numeral 4 is not mentioned in the description. The specification has been amended to include reference numeral 4. In particular, paragraph [0010] of the specification now includes reference numeral 4, which is the air supply to the reformer.

In addition, the Examiner has indicated that Figure 1 is to be relabeled "PRIOR ART" since that which is known is illustrated. The applicants have amended the drawing per 37 C.F.R. 1.121 (d) to include the label "PRIOR ART" on Figure 1. Replacement Figure 1 with the indicated change is attached hereto and is identified in the top margin as "Annotated Sheet." Also attached hereto is the original version of Figure 1. Applicants respectfully request that the Examiner accept the replacement sheet for Figure 1.

No new matter is introduced with the submission of the specification amendment and the corrected drawing.

In view of the amendment to the specification and correction to the drawing, the applicants respectfully request that the Examiner withdraw the objections to Figure 1.

U.S. Serial No. 10/675,169

Reply to Office Action of: September 6, 2005

Family Number: P2002J108

2. Objection to the Abstract of the Disclosure

The abstract of the disclosure has been objected to because of incorporating the improper use of legal phraseology, such as "comprising." The applicants have amended the abstract to remove "comprising." The amended abstract identifies the chemical compound, and its use as suggested under MPEP 608.01 (b).

In view of the foregoing amendment, the applicants respectfully request that the Examiner withdraw the objection to the abstract of the disclosure.

3. Objections to the Specification

The disclosure is objected to because Figure 1 refers to "Fuel" by reference numeral 1, wherein the specification at paragraph [0010] describes the "fuel tank" as being represented by reference numeral 1. Figure 1 has been amended to now refer to reference numeral 1 as the "Fuel tank" to be consistent with the specification.

The disclosure is also objected to because it does not refer to reference numeral 4 included in Figure 1. As previously mentioned under subsection 1, the specification has been amended to include reference numeral 4. In particular, paragraph [0010] of the specification now includes reference numeral 4, which is the air supply to the reformer.

No new matter is introduced with the submission of the amendments to the specification and drawing.

In view of the foregoing amendments, the applicants respectfully request that the Examiner withdraw the objections to the specification.

4. Claim Rejections under 35 U.S.C. 112

A. Claims 8-10

Claims 8-10 are rejected under 35 U.S.C. 112- second paragraph as allegedly being indefinite for failing to clearly point out how kilowatts is being used to express "mixing energy" in units of "KW/liter of fluid." The applicants respectfully disagree.

U.S. Serial No. 10/675,169
Reply to Office Action of: September 6, 2005
Family Number: P2002J108

35 U.S.C. 112- second paragraph requires that the claims particularly point out and distinctly claim the subject matter of the invention. The essential inquiry pertaining to this requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. MPEP 2173.02 further points out that definiteness of the claims must be analyzed, not in a vacuum, but in view of the following: i) the content of the particular application disclosure, ii) the teachings of the prior art, and iii) the claim interpretation that would be given by one possessing the ordinary skill in the pertinent art at the time the invention was made.

In the present case, claim 8 sets forth in part that the "mixing energy in the range of 0.15×10^{-5} to 0.15×10^{-3} KW/liter of fluid." There is no basis in law that the phrase "KW/liter of fluid" is per se indefinite. Furthermore, the Examiner should not disregard the phrase without considering whether the phrase is definite when read in light of the written description. Paragraph [0026] of the present disclosure sets forth that low shear mixing can be expressed in terms of mixing energy, and more specifically "in the mixing energy range of 0.15×10^{-5} to 0.15×10^{-3} kW/liter of fluid." Paragraph [0026] further describes that "mixing energy can be calculated by one skilled in the art of mixing fluids [and] [t]he power of the mixing source, the volume of fluid to be mixed and the time of mixing are some of the parameters used in the calculation of mixing energy." One skilled in the art of mixing fluids would recognize that "KW" signifies kilowatt, which is a common measure of power defined as energy per unit of time. Moreover, the power or energy applied in mixing a given volume of fluid is expressed as "KW/liter of fluid." Hence in the present case, the phrase "KW/liter of fluid" is definite because when read in light of the disclosure, the metes and bounds of the claim can be clearly determined by a person having ordinary skill in the art.

The applicants accordingly and respectfully request withdrawal of the rejection of claims 8-10 under 35 U.S.C. 112- second paragraph.

B. Claim 4

Claims 4 is rejected under 35 U.S.C. 112- second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention for

U.S. Serial No. 10/675,169
Reply to Office Action of: September 6, 2005
Family Number: P2002J108

including the phrases "substantially free of salts," and "the long from of The Periodic Table of Elements." The applicants respectfully disagree that the phrase "substantially free of salts" is indefinite.

Claim 4 and paragraph [0018] of the specification have been amended to set forth the particular elements included in Groups I and II of "the long from of The Periodic Table of Elements." In particular, the Group I and II elements of the long from of The Periodic Table of Elements include respectively H, Li, Na, K, Rb, Cs and Fr; and Be, Mg, Ca, Sr, Ba and Ra. No new matter is introduced into the specification or the claims with this amendment as the applicants have simply clarified what is already present in the disclosure.

MPEP 2173.05(b) sets out that when a term of degree is presented in claim, a two-part test must be applied to determine whether it is indefinite under 35 U.S.C. 112- second paragraph. First, a determination must be made as to whether the specification provides some standard for measuring that degree. If it does not, the second part of the test is to determine whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention. The term "substantially" is not indefinite per se when used in conjunction with another term to describe a particular characteristic of the claimed invention. The term "essentially" is also not indefinite per se when used in a claim. See MPEP 2173.05(b). The Court of Appeals for the Federal Circuit held that the limitation "which produces substantially equal E and H plane illumination patterns" was definite because one of ordinary skill in the art would know what is meant by "substantially equal." *Andrew Corp. v. Gabriel Electronics*, 847 F.2d 819, 6 USPQ2d 2010 (Fed. Cir. 1988).

In the present case, claim 4 sets forth in part that "said water is substantially free of salts of halides, sulfates and carbonates." There is no basis in law that the phrase "substantially free" is per se indefinite. Furthermore, the Examiner should not disregard the phrase without considering whether the phrase is definite when read in light of the written description, and whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention. Paragraph [0018] of the present disclosure sets forth that "[t]he water component of the emulsion composition of the

U.S. Serial No. 10/675,169

Reply to Office Action of: September 6, 2005

Family Number: P2002J108

instant invention comprises water that is substantially free of salts of halides sulfates and carbonates of Group I and Group II elements of the long form of The Periodic Table of Elements [and that] [d]istilled and deionized water is suitable." In view of the specification and the knowledge of one of ordinary skill in the art, the phrase "substantially free" is sufficiently definite such as to distinguish between unavoidable impurities and essential ingredients in the water fed to the fuel cell system.

In view of the foregoing remarks and amendments, the applicants respectfully request withdrawal of the rejection of claim 4 under 35 U.S.C. 112- second paragraph.

5. Claim Rejections under 35 U.S.C. 103

Claims 1-15 have been rejected as allegedly being unpatentable under 35 U.S.C. 103 (a) over U.S. Pre-grant Patent Publication No. 2001/0038934 to Berlowitz (herein "Berlowitz") in view of one to three prior art references depending upon the claim. The Applicants respectfully disagree.

Under 35 U.S.C. 120 and 37 C.F.R. 1.78, an alleged continuation-in-part application is permitted to claim the filing date of an earlier nonprovisional application if the alleged continuation-in-part applications complies with the following formal requirements: 1) the first application and the alleged continuation-in-part application were filed with at least one common inventor; 2) the alleged continuation-in-part application was "filed before the patenting or abandonment of or termination of proceedings on the first application or an application similarly entitled to the benefit of the filing date of the first application;" and 3) the alleged continuation-in-part application "contains or is amended to contain a specific reference to the earlier filed application."

The applicants hereby request that the current application be amended to claim benefit of and be designated as a continuation-in-part of of the Berlowitz reference cited by the Examiner, pursuant to 35 U.S.C. 120 and 37 CFR 1.78 (a). The current application and Berlowitz reference each names Paul J. Berlowitz as an inventor, thereby establishing the first requirement of common inventorship under 35 U.S.C. 120. In terms of the second requirement of 35 U.S.C. 120, the instant invention is copending with a U.S. application

U.S. Serial No. 10/675,169

Reply to Office Action of: September 6, 2005

Family Number: P2002J108

entitled to the benefit of the filing date of the Berlowitz reference. More particularly, the Berlowitz reference, currently abandoned, is a continuation of U.S. Patent Application Serial No. 09/312,728 filed May 14., 1999, also currently abandoned. However, continuation U.S. Patent Application Serial No. 10/412,190 filed April 11, 2003, currently pending, claims the benefit and is entitled to the priority of both the Berlowitz reference and U.S. Patent Application Serial No. 09/312,728. In terms of the third requirement, the present disclosure has been amended to contain a specific reference to the Berlowitz reference. More particularly, paragraph [0001] of the present disclosure has been amended to be a continuation-in-part application and claim the benefit of U.S. Patent Application Serial No. 09/312,728 filed May 14., 1999, currently abandoned, continuation U.S. Patent Application Serial No. 09/791,996 filed February 23, 2001, currently abandoned, and continuation U.S. Patent Application Serial No. 10/412,190 filed April 11, 2003, currently pending.

In view of the foregoing remarks, the applicants submit that the Berlowitz reference is not prior art against the present disclosure, and respectfully request the Examiner to withdraw the rejection of claims 1-15 under 35 U.S.C. 103.

U.S. Serial No. 10/675,169

Reply to Office Action of: September 6, 2005

Family Number: P2002J108

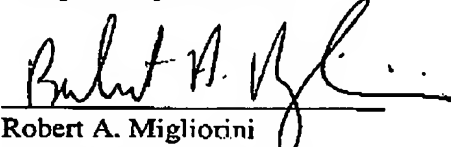
V. CONCLUSION

For all of the foregoing reasons, it is respectfully submitted that all objections and rejections of the specification, claims and drawings have been overcome, and that the pending claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. No additional fees are believed to be required with this Amendment, however if any other fee is required, or otherwise necessary to cover any deficiency in fees already paid, authorization is hereby given to charge Deposit Account Number 05-1330.

If there should be any questions in connection with this request, the undersigned may be contacted at the number below.

Date: December 5, 2005

Respectfully submitted,


Robert A. Migliorini
Attorney for Applicant(s)
Registration No. 50,262.☒ Pursuant to 37 CFR 1.34(a)**PTO Correspondence Address:**

ExxonMobil Research and Engineering Company
P. O. Box 900
Annandale, New Jersey 08801-0900
Telephone Number: (908) 730-2951
Facsimile Number: (908) 730-3649

RAMT1-Amendment after 1st OA_P2002J108_Dec.05

Annotated Sheet

COMPLEX OIL-IN-WATER-IN OIL (O/W/O) EMULSION COMPOSITIONS FOR FUEL CELL REFORMER START-UP
 Applicant(s): Ramesh Varadaraj et al.
 Docket No. RV-0318

FIGURE 1: CONVENTIONAL SYSTEM WITH NON-EMULSIFIED FUEL
 Prior Art

